MASS DISEASE: WHAT PUBLIC HEALH EXPECTS, WHAT HOSPITALS FEAR

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1. Overview and Purpose

This session explores the likely role that private hospitals and health care providers will play during a public health emergency, primarily a mass disease outbreak. Public health authorities have broad powers and authorities and are prepared to use them to control and suppress an outbreak. Because of the lack of capacity of the public health system, non-governmental hospitals, and other facilities and providers, will be called on to participate in control and suppression efforts. The success of these efforts will depend on the prompt, effective cooperation of the health care industry.

But fears of liability, uncertainty about roles and expectations, and a mismatch between the expectations of public health authorities and the lack of awareness of private providers could, in the event, lead to delays, conflicting instructions, and ultimately an unsuccessful approach to the public health emergency. Conflicts between public health and private health care providers could lead to uncontrolled epidemics and greatly increased morbidity and mortality.

After the catastrophes of 2005, especially Hurricanes Katrina and Rita, the public at large clearly expects all institutions, public and private, to be well-prepared for predictable emergencies. Nothing is more predictable to occur than a mass disease outbreak: there are thousands of years of human history teaching anyone who will pay attention that epidemics and pandemics occur from time to time. Although no one can predict when the next mass disease outbreak will take place, or whether it will be SARS (severe acute respiratory syndrome), avian flu, *Ebola*, smallpox or some unknown disease, anyone who studies the issues for more than a few minutes will rapidly conclude that readiness for a mass disease outbreak is essential. The public absolutely expects the health care community to get this right. If we fail to do so, hospitals and the public health care system can expect severe criticism and, more than likely, litigation alleging liability for lack of preparedness.

The public and private health communities have not coordinated either their expectations or their emergency responses well in the recent past. Part of readiness for a mass disease outbreak includes legal readiness, to identify and if possible answer the key legal questions that may arise, and for which failure to be ready could adversely affect response efforts. The purpose of this paper is to raise the key legal issues that will confront hospitals called on to participate in responding to a mass disease outbreak, and to encourage hospitals to assure they and their local public health authorities have explored and, to the extent possible, answered these questions before an emergency arises.

2. Public Health Emergencies – Types

Private providers may be called on to assist in responding to a variety of public health emergencies, including:

2.1. Pandemic Disease Outbreak

A pandemic is an outbreak of disease that strikes virtually everywhere, either simultaneously or sequentially. A pandemic is essentially a world-wide epidemic. Pandemics may be naturally occurring, such as the outbreaks of bubonic plague in Europe during the Middle Ages and of smallpox among Native Americans following European contact; or the result of human action. If the anthrax attacks of 2001 had become more widespread with sustained transmission among the general population, they could have result in a human-origin pandemic.

During 2002 and 2003, an epidemic of SARS broke out in various Asian countries and in Toronto, Canada. These epidemics never developed into a pandemic, but they did remind public health authorities of the risks of pandemic disease in an era of rapid modern transportation. A highly infectious disease can quickly move from continent to continent and city to city as fast as the air travel network can carry its victims.

Currently, a great deal of attention is being focused on the possibility of an avian flu pandemic – the great fear if the current avian influenza affecting birds throughout Asia and Europe were to mutate to a form with sustained human-to-human transmission. Given the high mortality and morbidity of this flu, a pandemic could have devastating world-wide consequences. Beyond SARS and avian flu, pandemics of new diseases or bioengineered disease strains used as weapons could lead to illness beyond the ability of normal public health systems to handle.

2.2. Mass Casualty Event

Mass casualty events may occur either accidentally or as the result of a deliberate human act. Earthquakes, airplane crashes and terrorist attacks, for example, can all cause mass casualties. Like pandemic disease outbreaks, mass casualty events tend to rapidly overwhelm the existing health care system and call for public health response and control. Unlike in a pandemic, victims of mass casualty events tend to suffer from blunt or penetrating trauma as the primary clinical issue rather than an infectious disease. Unfortunately, mass casualty events can lead to local epidemics of infectious disease if the public health infrastructure of water and food safety breaks down.

2.3. Area-wide Emergency

Area-wide emergencies strain the health care system and can require public health intervention to prevent worse results. Snow storms, hurricanes and other natural disasters can lead to a need for public health coordination of health care resources.

3. Public Health Responses

Each public health emergency will call for a response tailored to the specific circumstances of the event. That response, however, will typically make use of some, many or all of the following public health measures that may be applied to prevent, limit or mitigate a mass disease outbreak:

3.1. Syndrome Surveillance, Case Contact Investigation

When a risk for infectious disease exists, public health authorities monitor syndromes locally, nationally and globally. During 2002 and 2003, when SARS struck East Asia and Toronto, public health officials established and distributed lists of clinical symptoms that if observed would be cause for concern that SARS was present in a given location. Local health providers were then either requested or required to provide information to public health if and when they detected the symptoms.

Once a particular disease occurs, case contact investigation may be necessary to understand who besides the immediately affected individual may have been exposed and at risk for infection. Many laypeople are aware of the use of case contact investigation for sexually transmitted diseases; such investigations were also used during the SARS outbreak of 2002-2003, and would be used in the case of smallpox or similar diseases. The goal is to identify those who need to be observed, potentially treated to avoid developing the disease, and kept separate from unexposed people to prevent the spread of the disease if possible.

3.2. Treatment/Prevention Interventions

Mandatory treatment or prevention are time-honored and effective public health interventions. Polio is essentially a thing of the past in the United States because of a universal system of immunization. Similarly, smallpox was eradicated world-wide after a global vaccination campaign. Mandatory treatment has long been essential to control the spread of tuberculosis (since no vaccine exists to prevent it). Depending on the disease causing the pandemic, public health authorities could require either vaccination or treatment.

3.3. Travel/Border Controls

Government authorities impose travel restrictions to prevent the spread of disease from an infected area to an uninfected one. Obviously, such restrictions can only be effective if they are put in place before the disease is transported from the place origin to somewhere else. Many diseases, unfortunately, have incubation periods that include a symptom-free period. A person may, for example, be infected with measles but show no symptoms for several days. Restricting travel after infected but asymptomatic individuals have traveled to uninfected regions will therefore not prevent the spread of the disease. For other diseases, though, with very short incubation periods, such as *Ebola*, travel controls can stem the tide of the disease.

During the SARS outbreak of 2002-2003, the U.S. Division of Global Migration and Quarantine, a branch of the Centers for Disease Control and Prevention, imposed travel restrictions on persons coming to the United States from areas where SARS was present. SARS had a distinct clinical profile, was present in a limited number of places, and showed specific clinical symptoms. In this situation, travel controls were a potentially effective means to prevent the spread of disease.

3.4. Isolation and Quarantine

Isolation and quarantine are the well-established public health interventions used to separate infected or potentially infected individuals from the rest of the population. "Isolation" is the term used for persons who already are infected with the disease in question. "Quarantine" is used for those who have or may have been exposed to the disease but who are not yet confirmed to have it. The term "quarantine" comes from the Italian for "forty days", the period for which sailors returning to Venice from plague-infected regions in the eastern Mediterranean were restricted to their ships. During that time, the sailors either developed plague, or didn't, and the city was (theoretically) spared further plague outbreaks.[1]

Isolation and quarantine are very effective to prevent or control certain diseases. They were heavily used during the SARS outbreak of 2002-2003; at one point, more than 100,000 individuals in Taiwan were in either isolation (a few) or quarantine (the vast majority); many thousands were quarantined in Toronto as well when SARS took hold there.

Isolation and quarantine are usually highly regulated processes. State law provides the source of authority for imposing them; there is scant federal law providing for isolation and quarantine in general, and federal quarantine or isolation can be imposed only for specific listed diseases. Those diseases currently include

- Cholera
- Diphtheria
- Infectious tuberculosis
- Plague
- Smallpox
- Yellow fever
- Viral hemorrhagic fevers
- SARS
- "Influenza caused by novel or reemergent viruses that are causing, or have the potential to cause, a pandemic"

Diseases on the list are established by Executive Order of the President, most recently exercised on April 1, 2005, by "Executive Order: Amendment to E.O. 13295 Relating to Certain Influenza Viruses and Quarantinable Communicable Diseases".

[1] The Venetians really needed to quarantine the rats on board the ships if they wanted to control plague, since fleas on infected rats spread the disease.

For a copy, see http://www.whitehouse.gov/news/releases/2005/04/20050401-6.html. Statutory authority for such executive orders derives from the Public Health Service Act, 42 U.S.C. §264, and implementing regulations at 42 C.F.R. Parts 70 and 71.

Each state law is specific on requirements and conditions for isolation and quarantine.[2] The Centers for Disease Control and Prevention has proposed model legislation, called "Model State Emergency Health Powers Act", in an effort to encourage state legislatures to modernize their laws on, among other things, isolation and quarantine. The model act, prepared by the Center for Law and the Public's Health at Georgetown and Johns Hopkins Universities, is available at http://www.publichealthlaw.net/MSEHPA/MSEHPA2.pdf. Attorneys should consult the law of their particular state(s) for the applicable statutes in their jurisdiction.

3.5. Social Distancing

Social distancing is an important tactic to prevent the spread of disease. By decreasing the interaction among people, social distancing decreases the spread of disease. Social distancing may involve such steps as closing public places such as theaters and concert halls, establishing curfews, shortening hours during which retail establishments can open, and the like.

Predictably, social distancing requirements create significant hardships for uninfected individuals and impose potentially large economic costs. They will almost always be resented by those who are subject to them.

3.6. Temporary Restructuring of Health Care System

When a pandemic occurs, public health authorities may determine that it is necessary to temporarily restructure the health care delivery system. This restructuring may take include a combination of public health-operated hospitals and clinics, along with restrictions on or control of private health care facilities and providers. After Hurricane Katrina devastated the Gulf region in 2005, for example, public health authorities established mobile hospitals and morgues and temporary clinics to treat patients. During a pandemic, public health authorities may also change triage, admission and discharge criteria to be used by private hospitals in treating patients.

These changes are meant to assure care is delivered to most effectively control the disease outbreak. They may have the collateral effect, however, of forcing private hospitals and physicians to change their practices as directed by public health officials.

[2] For Washington State laws, see RCW Chap. 70.05, "Local Health Departments", RCW 43.20.050 (authority of State Board of Health), and W.A.C. Chap. 246-100 (isolation and quarantine regulations).

3.7. *Cordon Sanitaire*

A *cordon sanitaire* is a government-enforced quarantine line, preventing any interaction between those inside a disease-infested area and those outside it. Imagine troops using their weapons to keep people located inside a quarantine area from leaving it. This doomsday scenario obviously frightens many people, both those who would be subject to restriction and those who would enforce it. Obviously any imposition of a *cordon sanitaire* would occur only in the most dire of circumstances.

4. Public Health Considerations: Competing Legal Principles

Briefly, each of these public health interventions implicates potentially conflicting or competing legal principles:

4.1. Surveillance/case contact investigation

Surveillance and case contact investigation are essential to detect and deter emerging infectious disease epidemics. But they raise questions if applied unevenly to groups; during the SARS outbreak in 2002-2003, concerns were raised that persons of Asian descent were being unfairly targeted for surveillance and investigation. In addition, surveillance and case investigation raise privacy concerns. Although HIPAA rules permit sharing of information for public health purposes, 42 C.F.R. §164.512(b), individuals subject to surveillance or investigation may still have reasonable concerns about protection of their privacy.

4.2. Vaccination/treatment

Mandatory vaccination or treatment obviously can play a crucial role in controlling the spread of disease. But forcing individuals to undergo health care against their wishes is a profound assault on American principles of individual autonomy. In the heat of the moment, it is difficult to weigh objectively the burden on the individual of the proposed intervention – vaccination or treatment – against the perceived societal benefit. The power of public health authorities to impose such requirements was validated by the U.S. Supreme Court in *Jacobson v. Massachusetts*, 197 U.S. 11 (1905), in which the Court upheld a mandatory smallpox vaccination program in place in Massachusetts.

But the facts of that case were so outrageous – involving forced vaccination of homeless people who were rounded up and imprisoned to assure their inoculation – that it seems unlikely any modern court would uphold the practices used there. In addition, the broad language of *Jacobson* served as the unfortunate basis for *Buck v. Bell*, 274 U.S. 200 (1927), a case that upheld the right of public health authorities to sterilize a mentally incapacitated woman; in the famous words of Chief Justice Holmes, “three generations of idiots is enough”. Except that the woman subject to the forced sterilization was, it turns out, of normal, somewhat above average intelligence. Her social situation, not her mental condition, resulted in her

sterilization. This American case supporting the principles of eugenics, completely discredited after the excesses of European fascism, has been little heard from since 1945.

4.3. Travel/border controls

Travel and border controls were very effective in controlling the spread of SARS in 2002-2003. But they also impose significant economic costs; they curtail personal liberty and freedom of movement; and they are susceptible to discriminatory application. Historically, governments have tended to impose such controls on those who are perceived as "different", whether they posed a public health risk or not.

4.4. Social distancing

Restrictions on social mixing seem to have been effective in limiting the spread of the deadly influenza pandemic of 1918 in the United States; jurisdictions that took prompt, aggressive action to close public meeting places, limit hours of commerce and otherwise restrict contact with infected people seem to have had less severe flu outbreaks than those that were less restrictive. *Flu: The Story of the Great Influenza Pandemic of 1918 and the Search for the Virus that Caused It*, Gina Kolata (1999). But these measures impose economic costs on private parties, preventing them from operating and making money. They also conflict with First Amendment rights of free assembly, free association and petitioning the government. And if restrictions are imposed on church meetings, an important place of social mixing, they implicate freedom of religion as well.

The Mayor of Seattle during the 1918 flu pandemic, Ole Hanson, imposed stringent restrictions on public meetings, limiting the hours that stores could be open, canceling sporting and entertainment events, restricting attendance at church services, requiring the wearing of masks on public transportation, and so on. Seattle experienced a fairly mild flu epidemic compared with other cities, in a worldwide pandemic that ". . . killed more humans than any other disease in a period of similar duration in the history of the world". *America's Forgotten Pandemic: The Influenza of 1918*, Alfred W. Crosby (1989). Hanson was so castigated by the citizens and merchants of Seattle that he left office and the city immediately after the crisis and never returned. Social distancing imposes real costs.

4.5. Isolation and quarantine

Isolation and quarantine are public health interventions with a proven history of effectiveness in controlling or preventing the spread of disease. As the case of *Jacobson v. Massachusetts* illustrates, isolation and quarantine also involve major disruption for individuals, groups and institutions, impose major financial costs, and have a severe effect on personal liberty – individuals subject to isolation and quarantine are literally detained, taken out of their normal life, routine and occupation in order to benefit the public interest. Balancing society's interest in being free from

the spread of controllable disease against an individual's interest in liberty is no easy task.

5. Requirements for Hospitals during Mass Disease Outbreaks

Public health authorities will have certain expectations of private hospitals and providers in the event of a mass disease outbreak. Some of these expectations may not be consistent with those of the hospitals or providers.

5.1. Cooperate with syndrome surveillance and case investigations

Hospital emergency rooms are the front line for syndrome surveillance and case investigation but these systems impose costs, for recording the required information, reporting it to public health authorities, and assisting in case investigations. These costs are rarely specifically funded.

5.2. Provide instruction to patients and staff in communicable diseases

State law, or public health authorities, may rely on hospitals and providers to educate exposed or infected individuals about disease symptoms and treatment and restrictions on interactions with others to prevent the spread of the disease. These expectations may, however, be imposed on busy hospitals and unknowledgeable providers, who may feel that they lack both the time and the expertise to fulfill public health expectations. Radiologists frankly know little about most infectious diseases.

5.3. Cooperate with isolation and quarantine orders

Isolation and quarantine orders may require significant participation by hospitals and providers. There simply are not enough public health facilities to house all those who would require treatment in the event of a mass disease outbreak, and hospitals and nursing homes are likely to be chosen as the sites for at least some treatment. Private physicians will also be called on to care for exposed individuals in isolation or quarantine. Along with housing and treating patients subject to isolation or quarantine go a host of complexities that are difficult for hospitals to incorporate into their normal operations. Some of these issues are discussed in more detail below.

5.4. Enforce employer-based restrictions

Hospitals are major employers as well as health care providers, and many public health measures, such as social distancing tactics, may require employers to modify their practices. Certainly hospitals and other health care providers will be expected to comply without question with these requirements, since they will be presumed to understand the basis for the restrictions much better than other employers would. Limitations on operating hours and public meetings, and workplace quarantine requirements (a requirement than an exposed individual remain either at home or on the job, but nowhere else) will disrupt normal operations.

5.5. Restructure services as directed

In a mass disease outbreak, public health authorities may choose to regulate hospital admission, triage and discharge criteria, limit elective surgeries and other procedures, designate one or more facilities as the primary site for treatment of the outbreak disease, or take other steps to control the delivery of health care services in order to bring the epidemic under control or limit its effects. Obviously, such measures would be completely ineffective without the active participation of private hospitals and providers, but they would also be very disruptive to their operations.

6. Key Legal Issues for Hospitals to Consider

A virulent disease pandemic will create chaos on a scale not scene in the United States in living memory. Many legal questions may arise as public health and other governmental authorities struggle to cope with such a pandemic. Some of the questions are set out below. These questions are offered as legitimate concerns that hospitals and other participants in the private health care industry may want to discuss with local and state officials, in an effort to find answers and areas of agreement before the crisis. Waiting to think about and address these questions until the event may make the inevitable chaos even worse.

6.1. Procedural/Constitutional

6.1.1. What procedural requirements may be necessary to comply with constitutional due process guaranties?

Some state laws allow entry of an order of isolation or quarantine by an official with no hearing, or with a hearing only after the order has been entered. See, e.g., W.A.C. 246-100-040. It is not clear that these procedures are consistent with the requirements of the 14th Amendment to the Constitution or of state constitutional protections. Orders isolating an infected individual at a hospital necessarily implicate the hospital in this potentially unconstitutional activity.

Quarantine or isolation orders may be imposed on groups as well as individuals. For example, an order could quarantine all passengers of an airplane arriving from a location experiencing an epidemic. But the potential for misuse of group orders should be obvious: they may be imposed on suspect or disfavored groups without adequate medical justification. If such orders can be imposed without a hearing and without a showing of clear and convincing evidence, the potential for abuse, when emotions are running high during a crisis, is clear.

6.1.2. What liabilities may health care providers face for implementing or acquiescing in isolation or quarantine orders?

Federal law imposes liability on private actors who participate with the government in depriving an individual of constitutional liberties. 42 U.S.C. §§1983, 1985. If isolation or quarantine orders require individual hearings that

are not afforded, hospitals could face liability if they offer any assistance in implementing such orders.

6.1.3. What liabilities may health care providers face for *not* implementing orders of public health authorities, including isolation and quarantine orders?

Quarantine or isolation orders presumably reflect the best judgment of public health authorities that the individual or group subject to the order represents a threat to the public. Failure to implement orders could allow an infected person to infect others; the hospital or provider who allowed this to happen would likely face civil liability for damages if causation could be proven.

6.2. Financial

6.2.1. During an event, what compensation is available to facilities that are used for isolation and quarantine?

In general, private property may not be taken for a public use without just compensation under the 5th and 14th Amendments to the Constitution. Use of private hospitals for isolation or quarantine forces them to expend funds, may require them to forgo other revenue, and certainly shifts a certain amount of control of private property to the government. Hospitals will doubtless expect to be paid for their troubles.

But not all public health orders affecting private property entitle the owner to compensation. Public health authorities may order the demolition of a rat-infested building that is dangerous to the public health, for example, without compensation to the owner. *Queenside Hills Realty Co. v. Saxl*, 328 U.S. 80 (1946). Public health authorities typically have very limited budgets and little direct taxing authority. They may refuse to pay the costs of care provided to individuals in isolation or quarantine, or at least may decline to do so unless and until sued for compensation.

6.2.2. What compensation is available post-event for continuing losses experienced by facilities that were subject to isolation and quarantine orders?

After the end of the public health emergency, hospitals at its epicenter may find it difficult to return to normal operations, either immediately or ever. During the smallpox vaccination campaign of 2002, some local public health authorities made efforts to identify smallpox facilities to be used in the event of an epidemic caused by a bioweapon. It should be no surprise that few if any hospitals volunteered to serve this function, even if they appeared to be the most logical choice. Simply put, after serving as a smallpox facility, the widespread perception is that any facility would have to just be burned down; the public would never use it again for any purpose, given its association with the disease.

To a lesser extent, Toronto hospitals affected by the SARS outbreak of 2003 had a similar experience: the public associated those hospitals on the front line of the epidemic with SARS, and the hospitals suffered loss of revenue and patients and

difficulties in recruiting staff well after the epidemic was over. Should hospitals in these circumstances be entitled to recover for these post-epidemic effects?

6.2.3. Who pays the lost wages of employees who are placed in isolation or quarantine as a result of an exposure?

Hospitals like other employers will lose a significant portion of the work force in the event of a pandemic. Current estimates if avian flu achieves sustained human-to-human transmission suggest absentee rates of 30% or higher. But losing wages because of isolation or quarantine will impose a harsh burden on these employees. Especially if aggressive quarantine measures are taken – preventing many who never develop the disease from earning a living – society is imposing a large cost on individuals. But if employers, like hospitals, want to pay these workers while they are in quarantine or isolation, how will they be able to afford it? What does the public health authority plan to do in such a case? Is there any source to make good the loss of individual earnings?

6.2.4. Who pays for health care services provided to persons who are subject to isolation or quarantine and are detained in a private facility?

Public health officials hope to avoid paying the costs of caring for people in isolation or quarantine if they can avoid it – the costs are high and their budgets are small. Many hope that third party payors will pay these costs. Is that hope justified?

6.2.5. Will third-party payors pay for care provided to persons who are in isolation or quarantine?

Public health officials may want third party payors to cover people in isolation or quarantine as a result of an epidemic. Under most state laws, such coverage would be mandatory for care that was medically necessary. Query, if someone is in the hospital as a result of an isolation order, will the third party payor deny payment because the care arises from a court order and not the health plan's determination of clinical necessity?

6.3. Issues Affecting Exposed Health Care Workers

6.3.1. Who pays lost wages for employees subject to isolation or quarantine? (See above.)

6.3.2. Does the answer depend on whether the employee is placed in isolation by the hospital or by the public health authorities?

If a hospital, using syndrome surveillance criteria established by public health authorities, tells its employee not to come to work, will the employer's furlough policies (and potentially its union contracts) apply? Is the hospital off the hook if the isolation or quarantine is imposed by public health, not the employer?

6.3.3. Does the answer depend on whether the employee was exposed at work or outside of work?

Generally, under state law, illnesses acquired as a result of performing one's job duties qualify for time loss payments under workers' compensation laws, and of course ultimately employers fund the workers compensation system. In the event of a pandemic, without microbiological investigation, how will a hospital employer be able to demonstrate that the illness was or was not acquired while on the job at the hospital?

6.3.4. Will hospitals be expected to implement workplace quarantine for exposed workers?

Workplace quarantine was used extensively in Toronto during the 2003 SARS outbreak. There is some question whether it was effective in slowing the spread of the disease. Its use imposed compliance obligations on workers and employers and surveillance requirements on public health. At the same time, it permitted potentially exposed people to continue at their jobs unless and until they became sick. Is it a tactic that will be used in response to another epidemic?

6.4. Operational Issues

6.4.1. Who is responsible for enforcing isolation and quarantine orders?

Do public health authorities expect hospitals to take any role in enforcing orders? Will police or other public officials be available to enforce them?

6.4.2. Is it malpractice not to enforce an order of isolation or quarantine?

If public health officials direct hospitals to enforce isolation orders and prevent the departure of infected individuals, and hospitals fail to do so, will the hospital be liable for anyone who becomes sick as a result? How will causation be proven?

6.4.3. What do public health authorities and others expect of hospital security? Does the answer depend on the setting – ER, inpatient bed, outpatient clinic?

Hospital security officers may or may not be able to detain an inpatient who is the subject of an isolation order, but how are they supposed to act if a potentially infected person shows up at the ER or in an ambulatory clinic? Even if public health authorities expect hospital security to detain such people, is it really feasible to do so? What are the expectations of the parties?

6.4.4. If a patient must be detained in isolation due to an infectious condition, who will assure the patient stays put?

Presumably some physical force may be necessary to assure that a patient in isolation does not leave the isolation facility. Who will physically put hands on the patient – if anyone – to keep the person from leaving? Will there be enough law enforcement officials to serve this function?

6.4.5. If a patient is a hospital inpatient, how will isolation and quarantine orders be delivered to the patient?

Once a mass disease event occurs in a community, travel will be restricted. In Toronto in 2003, workers, patients and others at hospitals affected by SARS were not permitted to leave the hospital because they could have infected the larger community if they had done so. If an order must be served on the patient to be effective, will the person serving the order then themselves become subject to quarantine until it can be determined whether they are infected? If police officers serve orders, will they be required to stay at the hospital thereafter? Will public health employees attempt to deputize hospital workers for this purpose?

6.4.6. For hospital patients who are subject to isolation or quarantine, how will any required court hearing be conducted? Will it take place in the patient's room? What are the public health and court expectations of the hospital?

Persons subject to isolation or quarantine orders generally have the right to a hearing before a court, either before or after imposition of the order. If the person is a patient in a hospital, how will the hearing be conducted? Certainly judges and court personnel will be reluctant to come to the hospital, especially to the patient's room, and potentially expose themselves to the epidemic disease. What do the courts expect hospitals to be able to do in these situations? What do public health officials expect? Are these expectations consistent, either with themselves or with the actual capabilities of the facility?

7. Public Health Interventions: Applying Appropriate Ethical Principles

Beyond the legal issues raised by mass disease outbreaks and the imposition of isolation, quarantine and other public health measures, there are ethical questions and considerations to take into account. In discussing between the health care and public health systems about potential public health emergencies, the parties should develop solutions that meet these ethical criteria:

7.1. Transparency

Decision-making principles are articulated and communicated to the public at large. The public has an opportunity through elected representatives to challenge the principles and advocate for different ones.

7.2. Protection of Vulnerable Populations

Public health interventions deliberately and visibly demonstrate respect for and protection of vulnerable populations, including the young, the old, the frail, and those in socially disfavored groups.

7.3. Fair Treatment

Public health interventions are perceived to treat those in similar situations fairly. The wealthy, for example, are not able to buy access to needed drugs and services at the expense of the less well-off. Those in authority are not permitted to hoard resources for themselves to the detriment of marginal groups.

7.4. Social Justice

Public health decisions appear just and reasonable. The public at large knows the rationale for the decision and supports it as an appropriate balance of individual and community interests.

7.5. Least Restrictive Alternative

Any intervention restricts individual liberty and autonomy as little as possible.

L.O. Gostin, "Pandemic Influenza: Public Health Preparedness for the Next Global Emergency", *Journal of Law, Medicine & Ethics* (Winter 2004), 565-573.

8. Conclusions

8.1. Isolation and quarantine are ancient, honorable and effective public health measures. Other public health interventions are similarly effective.
8.2. Use of isolation and quarantine, and of other public health measures, involves major disruption to individuals, groups and institutions.
8.3. Health care facilities would benefit from resolution of open legal issues about the interaction between them and the public health system.

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